

CLAIMS

1. In a wireless communication system having a base station controller and a
2 plurality of base stations, a method comprising:
 segmenting a message into a plurality of segments;
4 dividing the segments into a plurality of fragments; and
 transmitting the fragments.
2. The method as in claim 1, further comprising:
2 retransmitting one of the plurality of fragments.
3. The method as in claim 1, further comprising:
2 applying a segment parameter to each segment.
4. The method as in claim 1, further comprising:
2 applying a segment indicator to each fragment.
5. In a wireless communication system having a base station controller and a
2 plurality of base stations, a base station, comprising:
 means for building segments of a message from a plurality of transmitted
4 frames;
 means for identifying a missing segment of the message; and
6 means for requesting a retransmission of the missing segment.
6. The base station as in claim 5, further comprising:
2 means for segmenting a message to form a plurality of segments;
 means for fragmenting the segments to form a plurality of fragments;
4 means for transmitting the plurality of fragments; and
 means for retransmitting one of the plurality of fragments.
7. A method for receiving transmissions in a wireless communication system,
2 comprising:

- receiving a transmission frame having a plurality of segments, each
4 segment having a plurality of fragments;
determining if any of the plurality of segments is missing;
6 if no segment is missing, reconstructing the message; and
if a segment is missing, requesting retransmission of the missing
8 segment.
8. The method as in claim 7, further comprising:
2 processing fragments of the transmission frame.
9. The method as in claim 7, further comprising:
2 determining an end of a segment; and
reconstructing the segment.
10. The method as in claim 7, further comprising:
2 if a segment is missing, sending a negative acknowledge message to the
transmitter of the transmission frame.
11. The method as in claim 7, further comprising:
2 if no segment is missing, sending an acknowledge message to the
transmitter of the transmission frame.
12. The method as in claim 7, further comprising:
2 determining a start of a segment; and
storing information in a buffer from the start of the segment.
13. The method as in claim 12, further comprising:
2 if the buffer is not empty at the start of a segment, flushing the buffer.
14. The method as in claim 13, further comprising:
2 if a fragment is not a start of segment and the buffer is empty, marking
the fragment as missing.
15. A wireless apparatus, comprising:

2 receiver for receiving a plurality of transmission frames;
segment extraction unit coupled to the fragment extraction unit, adapted
4 to identify and reconstruct segments within a transmission frame;
and
6 message reconstruction unit coupled to the segment extraction unit,
adapted to determine any missing segment within a message and
8 to request retransmission of the missing segment.

16. A computer data signal embodied on a carrier wave, characterized by:

2 a plurality of segments, each segment comprising:
a segment parameter; and
4 a plurality of fragments.

17. The computer data signal as in claim 16, wherein each of the fragments,

2 comprising:
segment identifier; and
4 an information portion.

18. The computer data signal as in claim 17, wherein the segment identifier

2 indicates if segmentation is active for transmission of the computer data
signal.

19. The computer data signal as in claim 16, wherein the segment error rate is

2 given as:

$$\text{SER} = 1 - (1 - \text{FER})^x$$

4 wherein FER is a frame error rate of the computer data signal, and x is the
number of fragments in the plurality of fragments.

20. The computer data signal as in claim 19, wherein the message error rate is

2 given as:

$$\text{MER} = 1 - (1 - \text{SER})^k$$

4 wherein k is the number of segments in the plurality of segments.